



Cherokee National Forest

Why do leaves change color?



Is it a wet period followed by a cold spell - that brings out the color in leaves? Or is it a dry period followed by a hard rain, or the first frost after a full moon?

Despite the many theories and attempts to predict nature's colors, the fact is, trees

tune into light to produce their annual beauty pageant that brightens the hillsides each fall. This even oversimplifies the complex interaction of chemicals, temperatures, length of days and moisture which scientists have yet to fully understand.

Trees are signaled to start changing colors in their leaves when days become shorter and nights become longer. As days get shorter, trees release a kind of hormone, restricting sap-flow to the leaves.

As autumn approaches, certain influences, both inside and outside the plant cause chlorophyll to be replaced at a slower rate than it is being used. Chlorophyll helps leaves turn sunlight into food all summer, but dwindles as fall progresses. When this happens, other pigments that have been present (along with the green chlorophyll) in the cells all during the leaf's life begin to show through. They give us the colorations of yellow, orange, brown, and other hues in between.

The reds, purples, and their combinations come from another group of pigments that are not present in the leaf during the growing season. They develop in late summer in the sap of cells of the leaf. Their formation depends on the breakdown of sugars in the presence of bright light as the level of phosphate in the leaf is reduced. Phosphates and other chemicals and nutrients, moves out of the leaf into the stem of the plant. The brighter the light during this period, the greater the chances are for a more brilliant fall.



These chemical processes are at work in the Cherokee National Forest (Forest). Leaf watchers and outdoor enthusiasts will soon be treated to nature's display of fall brilliance. The northern portion of the Forest usually peaks first, followed

by areas further south. The peak period varies each year and from area to area. The last two weeks in October are usually a good time to see lots of color. Of course, peak periods can vary greatly and things can change quickly. Sometimes it's difficult to tell exactly when the leaves will be at their peak .

<http://fs.usda.gov/cherokee>



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Popular fall color viewing routes

Northeast Tennessee

Paint Creek Corridor – Unaka Ranger district, Greene County, TN

Latitude: 35.977583 - Longitude: -82.843763— Meander along 5-mile Paint Creek Corridor to historic paint Rock. Picnicking and many other recreation opportunities are available along scenic Paint Creek Corridor.

Unaka Mountain Scenic Drive – Unaka Ranger District, Unicoi County, TN

Latitude: 36.117632 - Longitude: -82.333151—From Erwin, this drive makes a circle connecting TN 395, graveled Forest Road 230 and TN 107, a state scenic parkway, past Limestone Cove. The route winds from the valley floor in Unicoi County, TN to high-elevation spruce forests and balds atop Unaka Mountain.

TN State Route 143 to Carver's Gap – Watauga Ranger District, Carter County, TN

Latitude: 36.106911 - Longitude: -82.111158. - This state scenic parkway climbs through Roan Mountain State Park to Carvers Gap, with numerous long-distance mountain vistas, picnic spots, rhododendrons and spruce-fir forests spectacular.

Brush Creek Mountain Loop – Unaka Ranger District, Cocke County, TN

Latitude: 35.964287 - Longitude: -82.943475— Travel along TN 107, Forest Road 209 (some portions are gravel) and US 25/70. FR 209 meanders through a narrow canyon with rhododendron-covered bluffs.

Southeast Tennessee

Ocoee Scenic Byway – Ocoee Ranger District, Polk County TN

Latitude: 35.102244 - Longitude: -84.557121—The first designated national forest scenic byway in the nation includes 26 miles of US 64 and Forest Road 77. The two-lane route winds past Parksville Lake, through the scenic rocky bluffs of Ocoee River Gorge and past the Ocoee Whitewater Center. Take a side trip up the 7-mile Chilhowee Scenic Spur, Forest Road 77, to Chilhowee Recreation Area.

Hiwassee River Road – Ocoee Ranger District, Polk County, TN

Latitude: 35.198842 - Longitude: -84.473566—State Route 30 follows Hiwassee State Scenic River to the historic community of Reliance. Cross the bridge and turn east to Forest Road 108. Climb the mountain to Big Bend and Apalachia Powerhouse. Enjoy the views from Hood Mountain overlook and other spectacular sites along the corridor.

Tellico River Road – Tellico Ranger District, Monroe County, TN

Latitude: 35.323117 - Longitude: -84.175768—Take State Route 165 from Tellico Plains to Forest Road 210. The route follows Tellico River past Bald River Falls, where you can pull off to view the magnificent falls. A few miles farther, stop to view pools of teeming trout at historic Pheasant Fields Fish Rearing Pools.

Cherochala Skyway – Tellico Ranger District, Monroe County, TN

Latitude: 35.324505 - Longitude: -84.177268—View some of the best mountain scenery in the world from this 43-mile National Scenic Byway through the Cherokee and Nantahala national forests. Stop at overlooks to see expansive views of the Tennessee Valley and waves of mountain peaks. Stop for a picnic at Indian Boundary Recreation Area.

